

Recent Minima of 218 Eclipsing Binary Stars

Gerard Samolyk

P.O. Box 20677, Greenfield, WI 53220; gsamolyk@wi.rr.com

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Abstract This paper continues the publication of times of minima for eclipsing binary stars. Times of minima determined from CCD observations of 218 eclipsing binaries received by the AAVSO Eclipsing Binaries section from February 2021 through July 2021 are presented.

1. Recent observations

The accompanying list (Table 1) contains times of minima for 218 variables calculated from recent CCD observations made by participants in the AAVSO's eclipsing binary program. These observations were reduced by the observers or the writer using the method of Kwee and van Worden (1956).

The linear elements in the *General Catalogue of Variable Stars* (GCVS; Kholopov *et al.* 1985) were used to compute the O–C values for most stars. For a few exceptions where the GCVS elements are missing or are in significant error, light elements from another source are used: AC CMi (Samolyk 2008), DV Cep (Frank and Lichtenknecker 1987), Z Dra (Danielkiewicz-Krosniak *et al.* 1996), DF Hya (Samolyk 1992), DK Hya (Samolyk 1990), GU Ori (Samolyk 1985).

The light elements used for V376 And, EK Aqr, FS Aqr, V602 Aql, V688 Aql, V719 Aql, UZ CMi, BH CMi, CZ CMi, V776 Cas, VY Cet, AS CrB, GW Gem, V728 Her, WZ Leo, FS Leo, V351 Peg, CP Psc, DS Psc, DV Psc, DZ Psc, GR Psc, DK Sct, and V1223 Tau are from (Kreiner 2021).

The light elements used for DD Aqr, AW CrB, BD CrB, V470 Hya, V502 Oph, VZ Psc, and ET Psc are from (Paschke 2014).

The light elements used for V775 Cas and HO Psc are from (Nelson 2014).

The standard error is included when available. Column F indicates the filter used. A “C” indicates a clear filter.

This list will be web-archived and made available through the AAVSO ftp site at

<ftp://ftp.aavso.org/public/datasets/gsamj492eb218.txt>.

This list, along with the eclipsing binary data from earlier AAVSO publications, is also included in the Lichtenknecker database administrated by the Bundesdeutsche Arbeitsgemeinschaft für Veränderliche Sterne e. V. (BAV) at: <http://www.bav-astro.de/LkDB/index.php?lang=en>.

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Table 1. Recent times of minima of stars in the AAVSO eclipsing binary program.

<i>Star</i>	<i>JD (min)</i> <i>Hel.</i> 2400000+	<i>Cycle</i>	<i>O-C</i> <i>(day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard</i> <i>Error</i> <i>(day)</i>	<i>Star</i>	<i>JD (min)</i> <i>Hel.</i> 2400000+	<i>Cycle</i>	<i>O-C</i> <i>(day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard</i> <i>Error</i> <i>(day)</i>
RT And	59380.8318	29000	-0.0131	V	G. Samolyk	0.0001	BI Cas	59154.6752	3556	0.0384	V	L. Hazel	0.0003
XZ And	59426.7872	26118	0.2089	V	G. Samolyk	0.0001	IR Cas	59426.8127	25067	0.0178	V	G. Samolyk	0.0001
AB And	59413.8323	70216.5	-0.0521	V	G. Samolyk	0.0001	V775 Cas	59183.3693	536.5	0.8551	V	J. Coliac	0.0005
BD And	59413.8344	52822	0.0091	V	G. Samolyk	0.0002	V776 Cas	59184.3613	15176.5	-0.0107	V	J. Coliac	0.0009
V376 And	59177.4216	8360	0.0086	V	J. Coliac	0.0005	SU Cep	59370.8365	36660	0.0072	V	G. Samolyk	0.0001
SU Aqr	59137.6644	22780	-0.0323	C	G. Frey	0.0001	SU Cep	59426.7234	36722	0.0072	V	K. Menzies	0.0004
CX Aqr	59116.6833	40762	0.0188	C	G. Frey	0.0001	WW Cep	59397.8362	22410	0.3652	V	G. Samolyk	0.0001
DD Aqr	59142.6551	15695	-0.0047	C	G. Frey	0.0001	WZ Cep	59378.7090	75071.5	-0.2270	V	G. Samolyk	0.0002
EK Aqr	59132.6822	21638	0.0316	C	G. Frey	0.0001	XX Cep	59382.6858	6222	0.0375	V	L. Hazel	0.0003
FS Aqr	59109.6847	25222	-0.0005	C	G. Frey	0.0002	DV Cep	59398.6611	10874	-0.0059	V	G. Samolyk	0.0003
KO Aql	59418.4595	6121	0.1064	V	T. Arranz	0.0001	EG Cep	59398.6950	30855	0.0059	V	G. Samolyk	0.0001
OO Aql	59368.8245	40955	0.0801	V	G. Samolyk	0.0001	TT Cet	59158.6642	54764	-0.0876	C	G. Frey	0.0001
OO Aql	59416.4623	41049	0.0798	V	T. Arranz	0.0001	TX Cet	59173.6964	21720	0.0119	C	G. Frey	0.0001
V342 Aql	59409.4675	5925	-0.0893	V	T. Arranz	0.0002	VY Cet	59191.6563	19634	-0.0167	C	G. Frey	0.0001
V343 Aql	59371.8247	16767	-0.0508	V	G. Samolyk	0.0001	RW Com	59295.6336	81203	0.0182	V	L. Hazel	0.0003
V343 Aql	59410.5608	16788	-0.0514	V	T. Arranz	0.0001	RW Com	59295.7515	81203.5	0.0174	V	L. Hazel	0.0002
V346 Aql	59387.8401	15790	-0.0157	V	G. Samolyk	0.0001	RW Com	59296.8212	81208	0.0191	V	K. Menzies	0.0001
V602 Aql	59400.6986	2290	-0.0316	V	L. Hazel	0.0009	RW Com	59342.3920	81400	0.0194	V	T. Arranz	0.0002
V688 Aql	59425.4895	1780	-0.0032	V	T. Arranz	0.0004	RW Com	59342.5093	81400.5	0.0181	V	T. Arranz	0.0002
V719 Aql	59423.4482	1025	-0.0021	V	T. Arranz	0.0004	RW Com	59370.6358	81519	0.0191	V	G. Samolyk	0.0001
AP Aur	59280.5874	29571	1.8385	V	K. Menzies	0.0004	RZ Com	59294.8783	72251	0.0586	V	G. Samolyk	0.0001
AP Aur	59291.4066	29590	1.8407	V	T. Arranz	0.0002	RZ Com	59320.4351	72326.5	0.0582	V	T. Arranz	0.0001
AP Aur	59317.5981	29636	1.8439	V	G. Samolyk	0.0005	RZ Com	59357.6720	72436.5	0.0594	V	G. Samolyk	0.0001
CL Aur	59263.3611	21132	0.1885	V	T. Arranz	0.0005	SS Com	59294.7637	83071.5	1.0114	V	G. Samolyk	0.0003
EP Aur	59279.3746	55786	0.0203	V	T. Arranz	0.0002	SS Com	59322.4222	83138.5	1.0128	V	T. Arranz	0.0001
IM Aur	59273.4925	15039	-0.1385	V	T. Arranz	0.0002	SS Com	59380.6301	83279.5	1.0171	V	G. Samolyk	0.0001
TU Boo	59281.7426	80840.5	-0.1685	V	K. Menzies	0.0001	CC Com	59248.8867	89336.5	-0.0362	V	G. Samolyk	0.0002
TU Boo	59295.6875	80883.5	-0.1679	V	K. Menzies	0.0001	CC Com	59312.7736	89626	-0.0379	V	L. Hazel	0.0003
TU Boo	59341.4102	81024.5	-0.1696	V	T. Arranz	0.0001	CC Com	59340.3596	89751	-0.0377	V	T. Arranz	0.0001
TU Boo	59341.5732	81025	-0.1688	V	T. Arranz	0.0001	RW CrB	59345.6868	25597	0.0040	V	G. Samolyk	0.0003
TY Boo	59346.6063	78405.5	0.0573	V	K. Menzies	0.0001	RW CrB	59391.4504	25660	0.0037	V	T. Arranz	0.0001
TY Boo	59348.8270	78412.5	0.0580	V	K. Menzies	0.0002	TW CrB	59371.6945	36465	0.0626	V	G. Samolyk	0.0001
TY Boo	59358.4981	78443	0.0561	V	T. Arranz	0.0001	TW CrB	59376.4054	36473	0.0625	V	T. Arranz	0.0001
TY Boo	59382.6015	78519	0.0562	V	K. Menzies	0.0005	AS CrB	59375.5691	18062	0.0201	V	T. Arranz	0.0001
TY Boo	59414.6328	78620	0.0556	V	G. Samolyk	0.0004	AW CrB	59376.5779	22095	-0.0154	V	T. Arranz	0.0002
TZ Boo	59304.7238	66199	0.0548	V	K. Menzies	0.0004	BD CrB	59373.4566	22849	0.0216	V	T. Arranz	0.0005
TZ Boo	59351.3799	66356	0.0564	V	T. Arranz	0.0002	BD CrB	59393.4464	22905	0.0267	V	T. Arranz	0.0007
TZ Boo	59351.5281	66356.5	0.0560	V	T. Arranz	0.0001	BD CrB	59406.4699	22941.5	0.0244	V	T. Arranz	0.0005
TZ Boo	59370.6948	66421	0.0558	V	G. Samolyk	0.0002	W Crv	59338.4238	50738.5	0.0186	V	T. Arranz	0.0003
UW Boo	59280.8342	16797	-0.0061	V	K. Menzies	0.0003	W Crv	59339.3934	50741	0.0180	V	T. Arranz	0.0001
VW Boo	59293.7476	82146	-0.3125	V	G. Samolyk	0.0002	RV Crv	59334.7049	24497	-0.1138	V	G. Samolyk	0.0003
VW Boo	59293.9183	82146.5	-0.3130	V	G. Samolyk	0.0001	RV Crv	59346.6592	24513	-0.1155	V	G. Samolyk	0.0004
VW Boo	59347.6623	82303.5	-0.3140	V	G. Samolyk	0.0001	RV Crv	59347.4061	24514	-0.1159	V	T. Arranz	0.0002
VW Boo	59371.6241	82373.5	-0.3150	V	G. Samolyk	0.0003	SX Crv	59346.6372	57890	-1.0270	V	G. Samolyk	0.0003
AD Boo	59363.7666	17333	0.0391	V	G. Samolyk	0.0001	V Crt	59321.7189	25532	0.0009	V	G. Samolyk	0.0002
CK Boo	58268.6868	43282.5	0.0267	V	S. Cook	0.0010	V Crt	59322.4195	25533	-0.0005	V	T. Arranz	0.0001
CK Boo	59338.5220	46295	-0.0278	V	L. Corp	0.0005	SW Cyg	59368.8146	3827	-0.3869	V	G. Samolyk	0.0003
V376 Boo	59390.4161	22546	0.0001	V	T. Arranz	0.0009	WW Cyg	59398.8171	5733	0.1614	V	G. Samolyk	0.0001
AL Cam	59303.6903	24762	-0.0231	V	G. Samolyk	0.0001	ZZ Cyg	59383.6474	22881	-0.0823	V	L. Hazel	0.0003
WW Cnc	59294.4061	3002	0.0455	V	T. Arranz	0.0001	BR Cyg	59387.8315	13394	0.0019	V	G. Samolyk	0.0003
WY Cnc	59297.4521	39723	-0.0503	V	T. Arranz	0.0001	BR Cyg	59418.4799	13417	0.0013	V	T. Arranz	0.0001
XZ Cnc	59281.4066	8615	0.0207	V	T. Arranz	0.0001	CG Cyg	59376.8318	31612	0.0804	V	L. Hazel	0.0003
R CMa	59248.6996	13169	0.1382	V	G. Samolyk	0.0004	CG Cyg	59376.8328	31612	0.0814	V	G. Samolyk	0.0001
SX CMa	59248.7118	19180	0.0361	V	G. Samolyk	0.0002	DK Cyg	59380.8424	45425	0.1404	V	G. Samolyk	0.0002
UU CMa	59293.6157	6783	-0.0586	V	G. Samolyk	0.0002	DK Cyg	59405.7890	45478	0.1404	V	G. Samolyk	0.0003
UZ CMi	59286.6789	12308	0.0206	V	L. Hazel	0.0003	DO Cyg	59367.7920	8702	-0.0842	V	L. Hazel	0.0003
XZ CMi	59283.7140	29093	0.0075	V	L. Hazel	0.0003	KV Cyg	59348.8652	10525	0.0685	V	L. Hazel	0.0004
XZ CMi	59286.6097	29098	0.0092	V	L. Hazel	0.0003	MY Cyg	59398.7121	6379.5	0.0127	V	G. Samolyk	0.0002
XZ CMi	59296.4479	29115	0.0076	V	T. Arranz	0.0001	MY Cyg	59400.7027	6380	0.0007	V	G. Samolyk	0.0001
YY CMi	59317.5992	28605	0.0187	V	G. Samolyk	0.0002	V346 Cyg	59380.6844	8637	0.2078	V	G. Samolyk	0.0004
AC CMi	58882.6673	7961	0.0048	C	G. Frey	0.0001	V387 Cyg	59363.8127	48983	0.0182	V	G. Samolyk	0.0001
AK CMi	59278.3914	28586	-0.0265	V	T. Arranz	0.0001	V387 Cyg	59404.8103	49047	0.0177	V	G. Samolyk	0.0001
BH CMi	58888.6649	11423	0.0036	C	G. Frey	0.0003	V388 Cyg	59397.6617	20307	-0.1440	V	G. Samolyk	0.0003
CZ CMi	58872.6389	14945	-0.0160	C	G. Frey	0.0002	V401 Cyg	59349.7558	26624	0.1063	V	L. Hazel	0.0006
TY Cap	59413.8085	10271	0.1036	V	G. Samolyk	0.0003	V445 Cyg	59381.6623	9875	0.3356	V	L. Hazel	0.0005
TW Cas	59426.8228	12195	0.0243	V	K. Menzies	0.0002	V456 Cyg	59414.6687	16274	0.0538	V	G. Samolyk	0.0003

Table continued on following pages

Table 1. Recent times of minima of stars in the AAVSO eclipsing binary program, cont.

<i>Star</i>	<i>JD (min)</i> <i>Hel.</i> 2400000+	<i>Cycle</i>	<i>O-C</i> <i>(day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard</i> <i>Error</i> <i>(day)</i>	<i>Star</i>	<i>JD (min)</i> <i>Hel.</i> 2400000+	<i>Cycle</i>	<i>O-C</i> <i>(day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard</i> <i>Error</i> <i>(day)</i>
V466 Cyg	59361.7205	21980.5	0.0087	V	L. Hazel	0.0004	SW Lac	59420.8266	44105.5	-0.0768	V	G. Samolyk	0.0003
V477 Cyg	59400.7678	6481.5	-0.5157	V	G. Samolyk	0.0002	VX Lac	59382.7835	13145	0.0912	V	L. Hazel	0.0003
V477 Cyg	59404.7603	6483	-0.0437	V	G. Samolyk	0.0003	CM Lac	59426.6409	20191	-0.0032	V	G. Samolyk	0.0004
V704 Cyg	59348.8392	37514	0.0403	V	G. Samolyk	0.0003	CO Lac	59420.7666	20676	0.0115	V	G. Samolyk	0.0001
V1034 Cyg	59400.7465	16851	0.0232	V	G. Samolyk	0.0002	DG Lac	59376.7614	6738	-0.2517	V	L. Hazel	0.0003
TT Del	59366.7939	4923	-0.1439	V	G. Samolyk	0.0002	DG Lac	59398.8273	6748	-0.2511	V	G. Samolyk	0.0003
YY Del	59103.7098	20356	0.0130	C	G. Frey	0.0002	Y Leo	59289.3826	8216	-0.0824	V	T. Arranz	0.0001
YY Del	59417.7772	20752	0.0159	V	L. Hazel	0.0006	Y Leo	59304.5568	8225	-0.0831	V	K. Menzies	0.0001
YY Del	59421.7408	20757	0.0140	V	G. Samolyk	0.0002	UU Leo	59302.5890	8278	0.2378	V	G. Samolyk	0.0001
FZ Del	59426.7501	35881	-0.0302	V	L. Hazel	0.0003	UV Leo	59296.7211	34755	0.0482	V	K. Menzies	0.0001
Z Dra	59301.6524	6967	-0.0031	V	L. Hazel	0.0003	UV Leo	59320.4252	34794.5	0.0490	V	L. Corp	0.0002
RZ Dra	59348.6940	27540	0.0740	V	G. Samolyk	0.0001	UZ Leo	59320.3537	31583.5	0.0259	V	L. Corp	0.0006
RZ Dra	59416.4515	27663	0.0741	V	T. Arranz	0.0001	VZ Leo	59290.3902	25806	-0.0400	V	T. Arranz	0.0002
TW Dra	59371.7905	5428	-0.0700	V	G. Samolyk	0.0003	WZ Leo	59293.6181	4824	-0.0001	V	G. Samolyk	0.0003
TW Dra	59391.4370	5435	-0.0714	V	T. Arranz	0.0001	XY Leo	59309.3578	50105	0.1920	V	L. Corp	0.0002
UZ Dra	59347.6460	5451	0.0036	V	L. Hazel	0.0002	XY Leo	59309.4993	50105.5	0.1915	V	L. Corp	0.0003
AI Dra	59379.7610	13420	0.0421	V	G. Samolyk	0.0007	XZ Leo	59296.5729	29260	0.0859	V	K. Menzies	0.0001
BH Dra	59380.6536	10654	-0.0043	V	G. Samolyk	0.0002	XZ Leo	59309.4993	29286.5	0.0873	V	L. Corp	0.0006
BH Dra	59420.6338	10676	-0.0034	V	G. Samolyk	0.0004	AM Leo	59304.3534	45957	0.0133	V	L. Corp	0.0004
S Equ	59402.7867	4891	0.0933	V	L. Hazel	0.0003	FS Leo	59309.4432	14901	0.0092	V	L. Corp	0.0006
S Equ	59426.8380	4898	0.0919	V	G. Samolyk	0.0002	SS Lib	59372.4098	12668	0.1873	V	T. Arranz	0.0002
RW Gem	59276.4009	14299	0.0014	V	T. Arranz	0.0001	RY Lyn	59293.6386	11433	-0.0222	V	L. Hazel	0.0003
RX Gem	59308.3556	1536	0.0736	V	T. Arranz	0.0002	RY Lyn	59293.6388	11433	-0.0220	V	G. Samolyk	0.0001
SX Gem	59307.6046	29466	-0.0631	V	L. Hazel	0.0003	TZ Lyr	59419.6887	27675	-0.0051	V	L. Hazel	0.0006
SX Gem	59307.6065	29466	-0.0612	V	G. Samolyk	0.0001	EW Lyr	59345.7375	16855	0.3143	V	L. Hazel	0.0006
TX Gem	59261.3659	14076	-0.0432	V	T. Arranz	0.0001	RU Mon	59290.3836	4895	-0.1575	V	T. Arranz	0.0001
WW Gem	59281.4093	26900	0.0364	V	T. Arranz	0.0003	RW Mon	59296.3540	13439	-0.0930	V	T. Arranz	0.0001
AF Gem	59279.4475	25828	-0.0699	V	T. Arranz	0.0001	BB Mon	59268.3377	44475	-0.0042	V	T. Arranz	0.0002
AF Gem	59285.6678	25833	-0.0671	V	G. Samolyk	0.0003	SX Oph	59374.4880	12589	-0.0005	V	T. Arranz	0.0003
AL Gem	59278.4060	23685	0.1069	V	T. Arranz	0.0001	SX Oph	59382.7403	12593	-0.0015	V	G. Samolyk	0.0002
CX Gem	59297.3607	14380	-0.0438	V	T. Arranz	0.0003	SX Oph	59413.6895	12608	-0.0018	V	G. Samolyk	0.0004
FG Gem	59261.3814	39260	-0.0270	V	T. Arranz	0.0002	V501 Oph	59347.8328	29378	-0.0091	V	G. Samolyk	0.0002
GW Gem	59269.3474	10265	0.0019	V	T. Arranz	0.0001	V501 Oph	59413.6529	29446	-0.0096	V	G. Samolyk	0.0002
V405 Gem	59260.3871	14628.5	-0.0219	V	T. Arranz	0.0004	V502 Oph	59405.4348	24053	-0.0017	V	L. Corp	0.0003
SZ Her	59302.8515	21316	-0.0366	V	G. Samolyk	0.0001	V508 Oph	59352.7708	41388	-0.0288	V	L. Hazel	0.0003
SZ Her	59348.6653	21372	-0.0363	V	L. Hazel	0.0002	V508 Oph	59363.8060	41420	-0.0270	V	G. Samolyk	0.0001
SZ Her	59357.6638	21383	-0.0369	V	G. Samolyk	0.0001	V508 Oph	59371.7362	41443	-0.0270	V	L. Hazel	0.0003
TT Her	59375.7300	21248	0.0426	V	G. Samolyk	0.0008	V508 Oph	59415.5246	41570	-0.0272	V	T. Arranz	0.0001
TT Her	59399.4446	21274	0.0433	V	T. Arranz	0.0001	V839 Oph	59321.8475	46145	0.3456	V	G. Samolyk	0.0001
TU Her	59365.7030	6751	-0.2794	V	L. Hazel	0.0002	V839 Oph	59348.8415	46211	0.3459	V	G. Samolyk	0.0001
TU Her	59399.7089	6766	-0.2785	V	G. Samolyk	0.0003	V839 Oph	59378.6992	46284	0.3469	V	G. Samolyk	0.0001
UX Her	59353.7570	12707	0.1682	V	L. Hazel	0.0004	V839 Oph	59410.3977	46361.5	0.3483	V	T. Arranz	0.0001
UX Her	59370.7984	12718	0.1723	V	G. Samolyk	0.0001	V1010 Oph	59346.8424	30856.5	-0.2220	V	G. Samolyk	0.0004
UX Her	59423.4611	12752	0.1741	V	T. Arranz	0.0001	V1010 Oph	59347.8334	30858	-0.2231	V	G. Samolyk	0.0002
AK Her	59405.4456	40849.5	0.0222	V	L. Corp	0.0002	EQ Ori	59260.3821	15934	-0.0331	V	T. Arranz	0.0001
BO Her	59082.7015	5825	-0.1046	V	L. Hazel	0.0006	ER Ori	59247.5779	41618	0.1558	V	G. Samolyk	0.0001
CC Her	59009.7896	11154	0.3469	C	L. Hazel	0.0002	ER Ori	59259.4355	41646	0.1582	V	T. Arranz	0.0001
CC Her	59075.6789	11192	0.3440	V	L. Hazel	0.0002	ET Ori	59263.3320	34260	-0.0047	V	T. Arranz	0.0001
CC Her	59309.7859	11327	0.3603	V	L. Hazel	0.0003	FL Ori	59295.3865	8993	0.0403	V	T. Arranz	0.0001
CC Her	59349.6710	11350	0.3632	V	L. Hazel	0.0002	FR Ori	58887.6931	35130	0.0471	C	G. Frey	0.0002
CC Her	59370.4802	11362	0.3643	V	T. Arranz	0.0001	FZ Ori	59268.3248	38111	-0.0228	V	T. Arranz	0.0002
CT Her	59366.6710	9429	0.0110	V	G. Samolyk	0.0004	GU Ori	59286.4373	34453.5	-0.0735	V	T. Arranz	0.0002
CT Her	59402.3977	9449	0.0102	V	T. Arranz	0.0001	U Peg	59398.8298	61068.5	-0.1787	V	G. Samolyk	0.0002
LT Her	59381.6704	17182	-0.1639	V	G. Samolyk	0.0003	U Peg	59419.8178	61124.5	-0.1785	V	L. Hazel	0.0003
V728 Her	59413.6453	14669	0.0300	V	G. Samolyk	0.0004	BB Peg	59378.8377	43193.5	-0.0367	V	G. Samolyk	0.0001
WY Hya	59294.5894	26150	0.0439	V	G. Samolyk	0.0001	BB Peg	59414.8070	43293	-0.0368	V	G. Samolyk	0.0002
WY Hya	59303.5394	26162.5	0.0438	V	L. Hazel	0.0003	BN Peg	59130.7083	35377	-0.0010	C	G. Frey	0.0001
AV Hya	59292.6334	33098	-0.1210	V	G. Samolyk	0.0003	BO Peg	59124.6721	23280	-0.0636	C	G. Frey	0.0001
AV Hya	59310.4026	33124	-0.1204	V	T. Arranz	0.0001	DI Peg	59151.6737	19605	0.0173	C	G. Frey	0.001
DF Hya	59294.4200	49928.5	0.0207	V	T. Arranz	0.0001	DK Peg	59185.6458	8368	0.1795	C	G. Frey	0.0001
DF Hya	59294.5865	49929	0.0219	V	G. Samolyk	0.0001	GP Peg	59381.8341	18597	-0.0600	V	G. Samolyk	0.0001
DF Hya	59294.7511	49929.5	0.0212	V	G. Samolyk	0.0001	V351 Peg	59143.6507	17940	0.0599	C	G. Frey	0.0001
DF Hya	59299.3792	49943.5	0.0208	V	T. Arranz	0.0001	UV Psc	59157.6555	18293	-0.0217	C	G. Frey	0.0010
DI Hya	59283.4075	45695	-0.0432	V	T. Arranz	0.0001	VZ Psc	59126.6932	58541.5	0.0067	C	G. Frey	0.0001
DK Hya	59306.6613	31543	-0.0013	V	G. Samolyk	0.0001	CP Psc	59134.7438	9699	0.0012	C	G. Frey	0.0001
V470 Hya	59294.6134	16674.5	0.0062	V	G. Samolyk	0.0005	DS Psc	59135.6600	19374	-0.0003	C	G. Frey	0.0001

Table continued on next page

Table 1. Recent times of minima of stars in the AAVSO eclipsing binary program, cont.

<i>Star</i>	<i>JD (min)</i> <i>Hel.</i> <i>2400000+</i>	<i>Cycle</i>	<i>O-C</i> <i>(day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard</i> <i>Error</i> <i>(day)</i>	<i>Star</i>	<i>JD (min)</i> <i>Hel.</i> <i>2400000+</i>	<i>Cycle</i>	<i>O-C</i> <i>(day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard</i> <i>Error</i> <i>(day)</i>
DV Psc	59133.6460	21500	0.0139	C	G. Frey	0.0010	XZ UMa	59309.4274	10751	-0.1609	V	T. Arranz	0.0001
DZ Psc	95136.6824	116449	0.2348	C	G. Frey	0.0001	XZ UMa	59320.4281	10760	-0.1611	V	T. Arranz	0.0001
ET Psc	95129.6577	96750	-0.0338	C	G. Frey	0.0001	ZZ UMa	59309.6645	10159	-0.0019	V	L. Hazel	0.0006
GR Psc	59138.6703	15518	-0.0090	C	G. Frey	0.0001	W UMi	59413.8007	15126	-0.2322	V	G. Samolyk	0.0004
HO Psc	59145.6675	5620	0.0055	C	G. Frey	0.0002	RU UMi	59345.6517	33813	-0.0137	V	G. Samolyk	0.0006
UZ Pup	59291.4081	18466	-0.0124	V	T. Arranz	0.0001	VV Vir	59348.6875	63047	-0.0524	V	G. Samolyk	0.0001
UZ Pup	59292.6013	18467.5	-0.0115	V	G. Samolyk	0.0002	VV Vir	59363.4103	63080	-0.0521	V	T. Arranz	0.0001
UZ Pup	59294.5893	18470	-0.0107	V	L. Hazel	0.0003	VV Vir	59369.4373	63093.5	-0.0479	V	T. Arranz	0.0004
AV Pup	59294.6608	50538	0.2745	V	G. Samolyk	0.0002	AG Vir	59244.8867	21493	-0.0205	V	K. Menzies	0.0003
XZ Sgr	59424.6664	5353	0.0004	V	L. Hazel	0.0009	AG Vir	59320.4024	21610.5	-0.0162	V	L. Corp	0.0003
V505 Sgr	59379.8353	12612	-0.1315	V	G. Samolyk	0.0001	AH Vir	59338.4847	33185.5	0.3116	V	L. Corp	0.0003
V1968 Sgr	59376.7879	38271	-0.0180	V	G. Samolyk	0.0004	AH Vir	59346.6355	33205.5	0.3119	V	G. Samolyk	0.0002
DK Sct	59414.4414	5678	0.0173	V	T. Arranz	0.0004	AH Vir	59379.6451	33286.5	0.3123	V	G. Samolyk	0.0002
RS Ser	59397.7753	40920	0.0334	V	G. Samolyk	0.0004	AK Vir	59317.7690	14026	-0.0460	V	G. Samolyk	0.0001
AO Ser	59394.4683	28727	-0.0099	V	T. Arranz	0.0001	AK Vir	59352.3833	14055	-0.0460	V	T. Arranz	0.0001
CC Ser	59302.8534	42286.5	1.1872	V	G. Samolyk	0.0004	AW Vir	59306.8091	40351	0.0332	V	G. Samolyk	0.0001
CC Ser	59361.4249	42400	1.1920	V	T. Arranz	0.0002	AW Vir	59359.3777	40499.5	0.0332	V	T. Arranz	0.0002
CC Ser	59376.6478	42429.5	1.1927	V	G. Samolyk	0.0002	AW Vir	59359.5546	40500	0.0331	V	T. Arranz	0.0001
CC Ser	59395.4813	42466	1.1920	V	T. Arranz	0.0001	AW Vir	59375.6623	40545.5	0.0340	V	G. Samolyk	0.0002
RZ Tau	58880.6460	51011	0.0969	C	G. Frey	0.0002	AX Vir	59357.6759	45247	0.0289	V	G. Samolyk	0.0002
TY Tau	58879.6438	34981	0.2761	C	G. Frey	0.0002	AX Vir	59376.6448	45274	0.0296	V	G. Samolyk	0.0001
WY Tau	59295.5687	31603	0.0670	V	K. Menzies	0.0003	AZ Vir	59294.8255	43808.5	-0.0185	V	G. Samolyk	0.0002
AC Tau	59247.5874	6661	0.2031	V	G. Samolyk	0.0002	AZ Vir	59366.6831	44014	-0.0171	V	G. Samolyk	0.0004
EQ Tau	59181.6678	55569	-0.0509	C	G. Frey	0.0002	BH Vir	59368.7108	19756	-0.0137	V	G. Samolyk	0.0003
V1223 Tau	59186.6263	15487.5	0.0018	C	G. Frey	0.0001	Z Vul	59422.5221	6711	-0.0177	V	T. Arranz	0.0002
W UMa	59321.6365	40631	-0.1269	V	G. Samolyk	0.0005	AW Vul	59375.7443	16232	-0.0400	V	L. Hazel	0.0005
TY UMa	59303.6272	55764.5	0.4629	V	L. Hazel	0.0004	AW Vul	59404.7772	16268	-0.0393	V	G. Samolyk	0.0001
TY UMa	59306.6392	55773	0.4614	V	G. Samolyk	0.0001	AX Vul	59399.7885	7184	-0.0420	V	G. Samolyk	0.0002
TY UMa	59306.8163	55773.5	0.4612	V	G. Samolyk	0.0001	BE Vul	59398.7343	12427	0.1025	V	L. Hazel	0.0003
TY UMa	59321.3539	55814.5	0.4627	V	T. Arranz	0.0001	BE Vul	59426.6696	12445	0.1010	V	G. Samolyk	0.0001
TY UMa	59321.5304	55815	0.4619	V	T. Arranz	0.0001	BE Vul	59426.6699	12445	0.1013	V	L. Hazel	0.0003
UX UMa	59293.8145	111155	-0.0020	V	G. Samolyk	0.0002	BO Vul	59417.6901	12040	-0.0037	V	L. Hazel	0.0003
UX UMa	59317.6119	111276	-0.0019	V	G. Samolyk	0.0001	BO Vul	59425.4718	12044	-0.0054	V	T. Arranz	0.0001
UX UMa	59317.8084	111277	-0.0020	V	G. Samolyk	0.0001	BS Vul	59380.7944	33845	-0.0380	V	G. Samolyk	0.0001
UX UMa	59339.4429	111387	-0.0014	V	T. Arranz	0.0001	BS Vul	59424.5836	33937	-0.0382	V	T. Arranz	0.0001
UX UMa	59352.6196	111454	-0.0016	V	G. Samolyk	0.0002	BU Vul	59405.8063	45470	0.0116	V	G. Samolyk	0.0001
VV UMa	59334.6287	19668	-0.0976	V	G. Samolyk	0.0001							